



Navigating the Changing World of Reserves and Resources in the Context of the PRMS

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What is Discovery? An Unconventional Tale.

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DISCOVERY

Petroleum Resource Management System (PRMS) Guidelines 2024

A petroleum accumulation where one or several exploratory wells through testing, sampling, and/or logging have demonstrated the existence of a significant quantity of potentially recoverable hydrocarbons and thus have established a known accumulation.

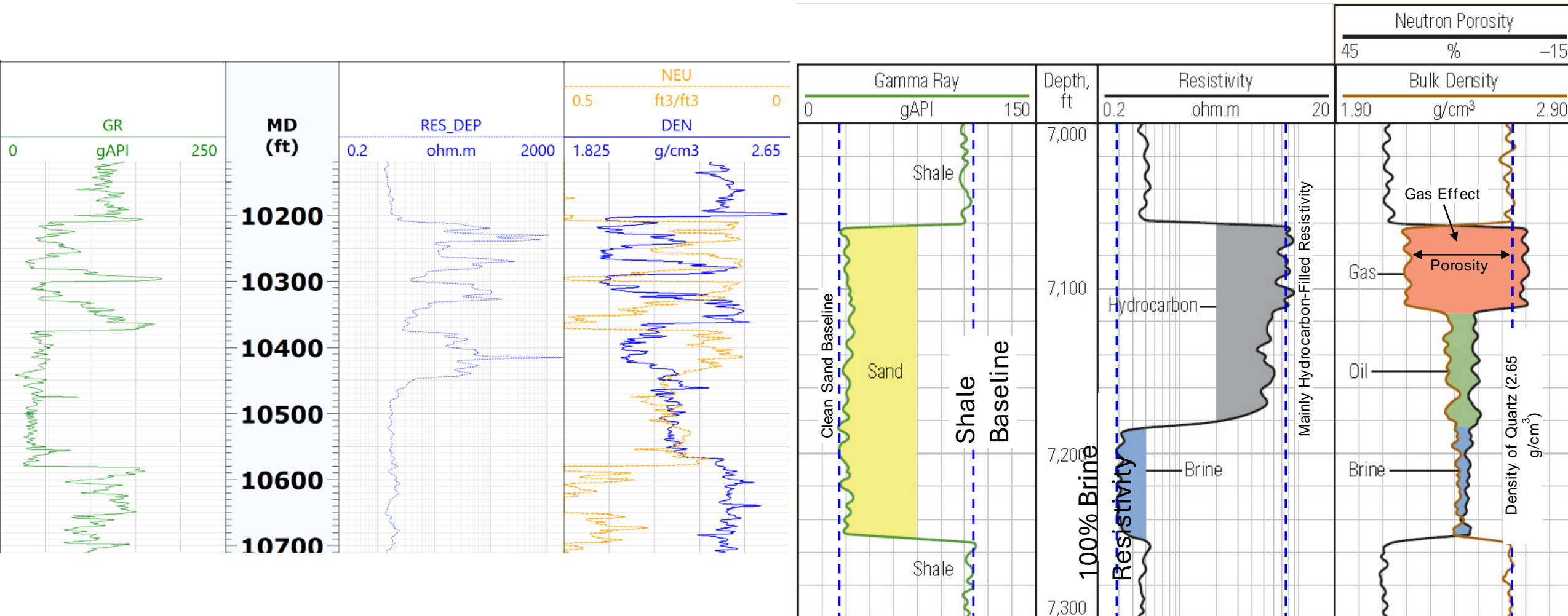
In this context, “significant” implies that there is evidence of a sufficient quantity of petroleum to justify estimating the in-place volume demonstrated by the well(s) and for evaluating the potential for commercial recovery.



Topics of Discussion

- 1) Conventional
- 2) Conventional vs Unconventional
- 3) Unconventional
- 4) Example Case Unconventional

Conventional Log Section - Discovery



Discovery Comparison

Conventional

Localized structures

Well

Well logs

Shows

Well tests

Mud logs

Cuttings

Seismic

Unconventional

"Continuous-type" deposit

Well

Well logs

Core

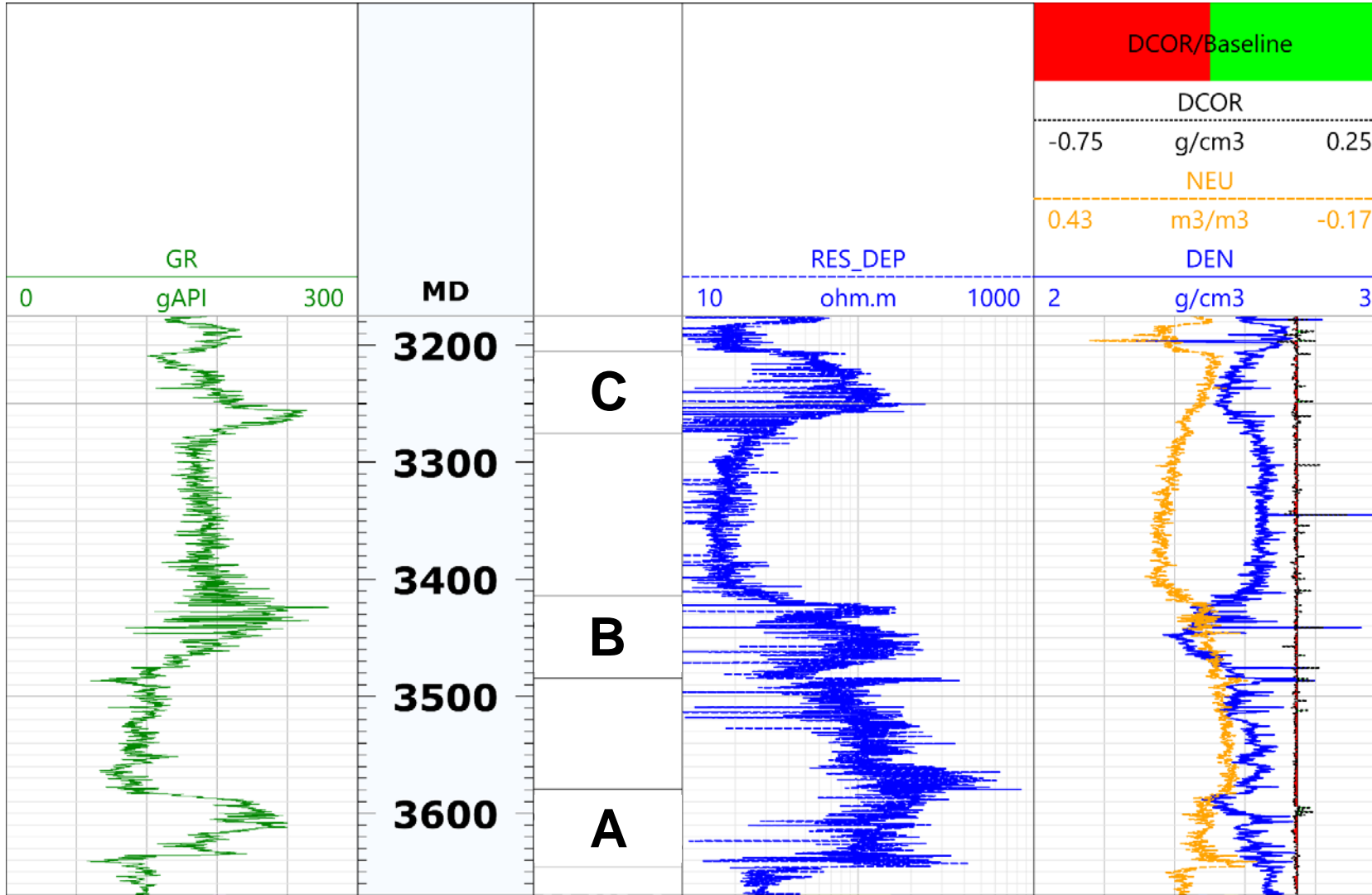
Well tests

Laboratory work

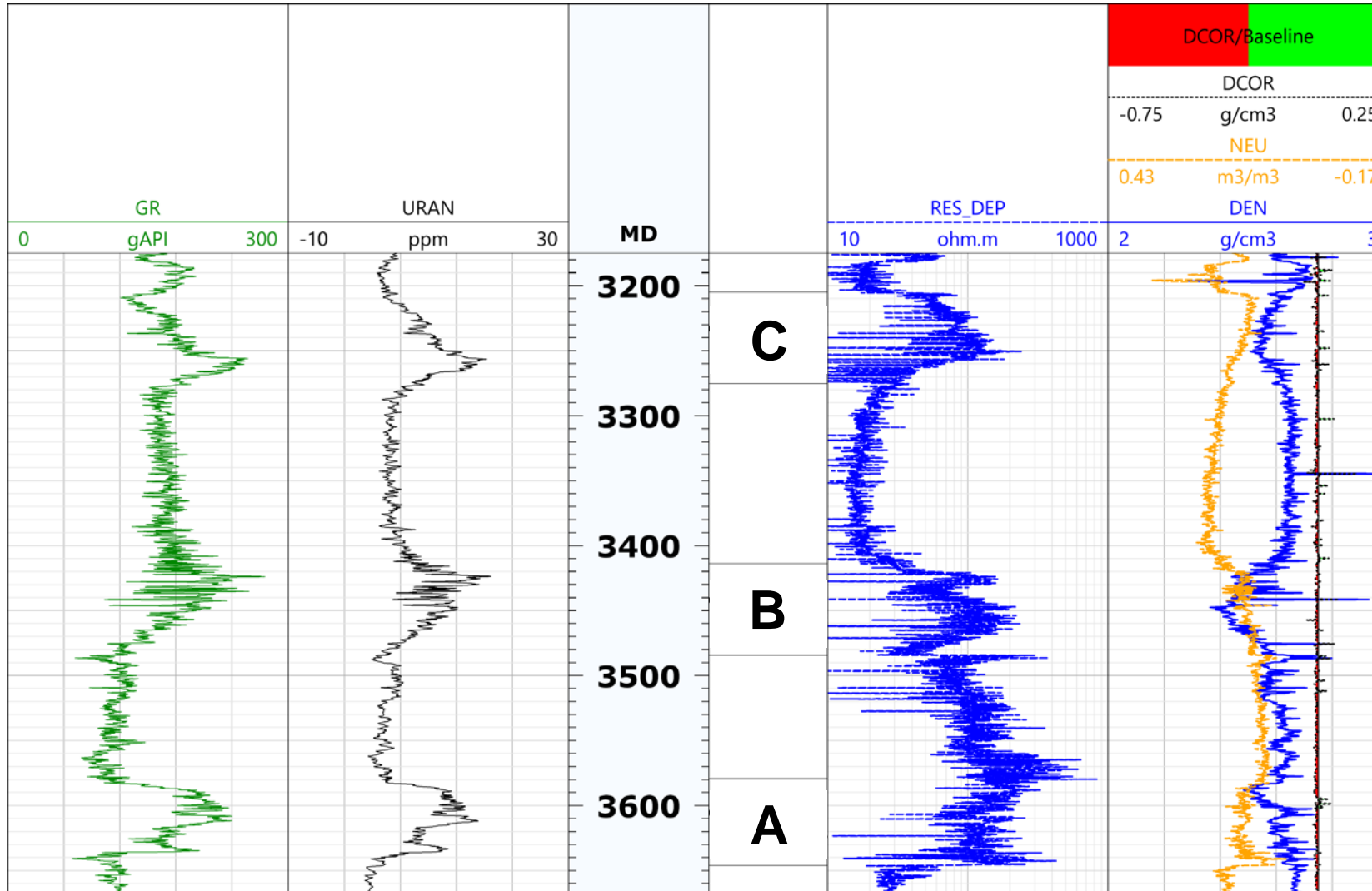
Unconventional Discovery: What's Required?

- Laboratory Data Required
 - Brittleness
 - Porosity
 - Ro – Maturity
 - Permeability
 - Saturation
 - Pyrolysis Information
 - TOC (Total Organic Carbon)
 - Mobile and Immobile Hydrocarbons
 - Clay Bound Water

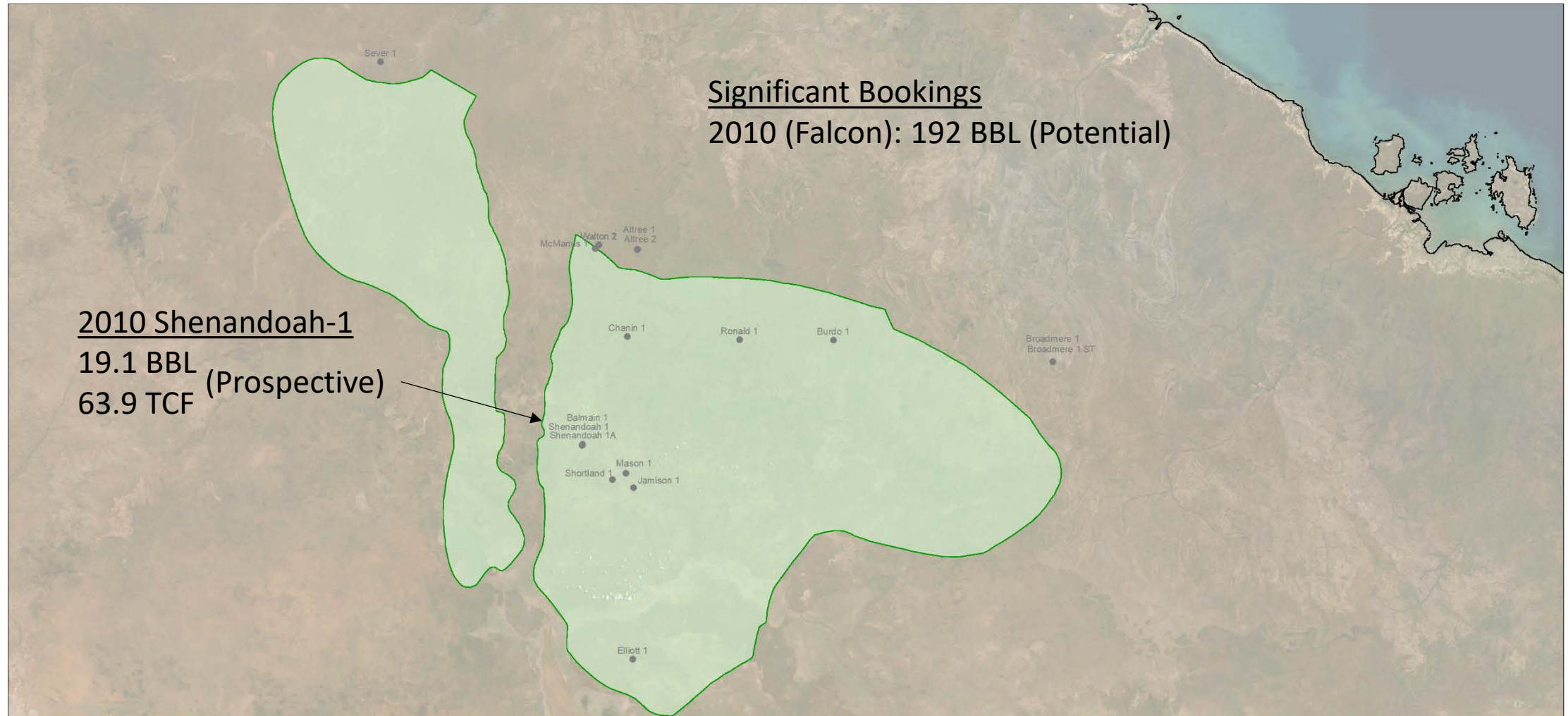
Unconventional – Basic Logs



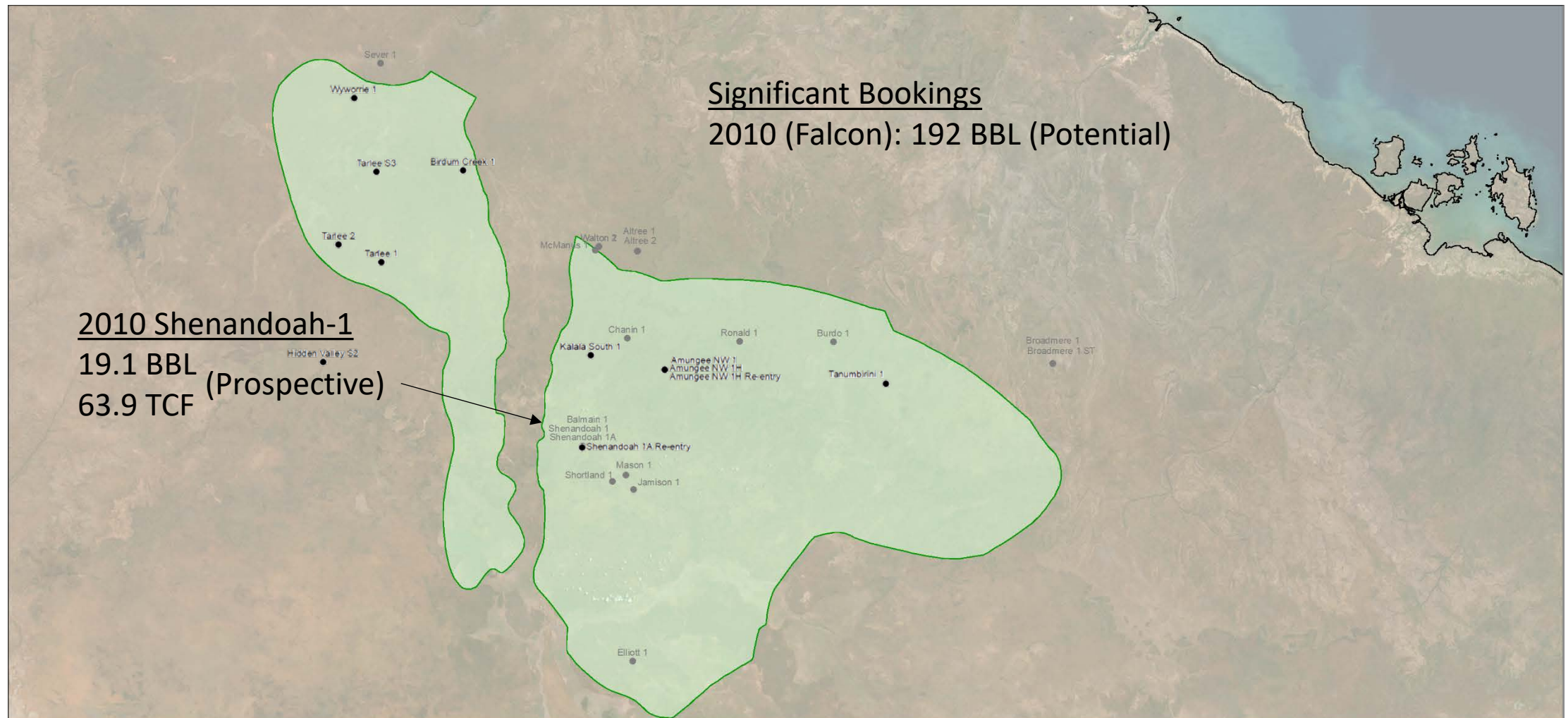
Unconventional – Enhanced Logs



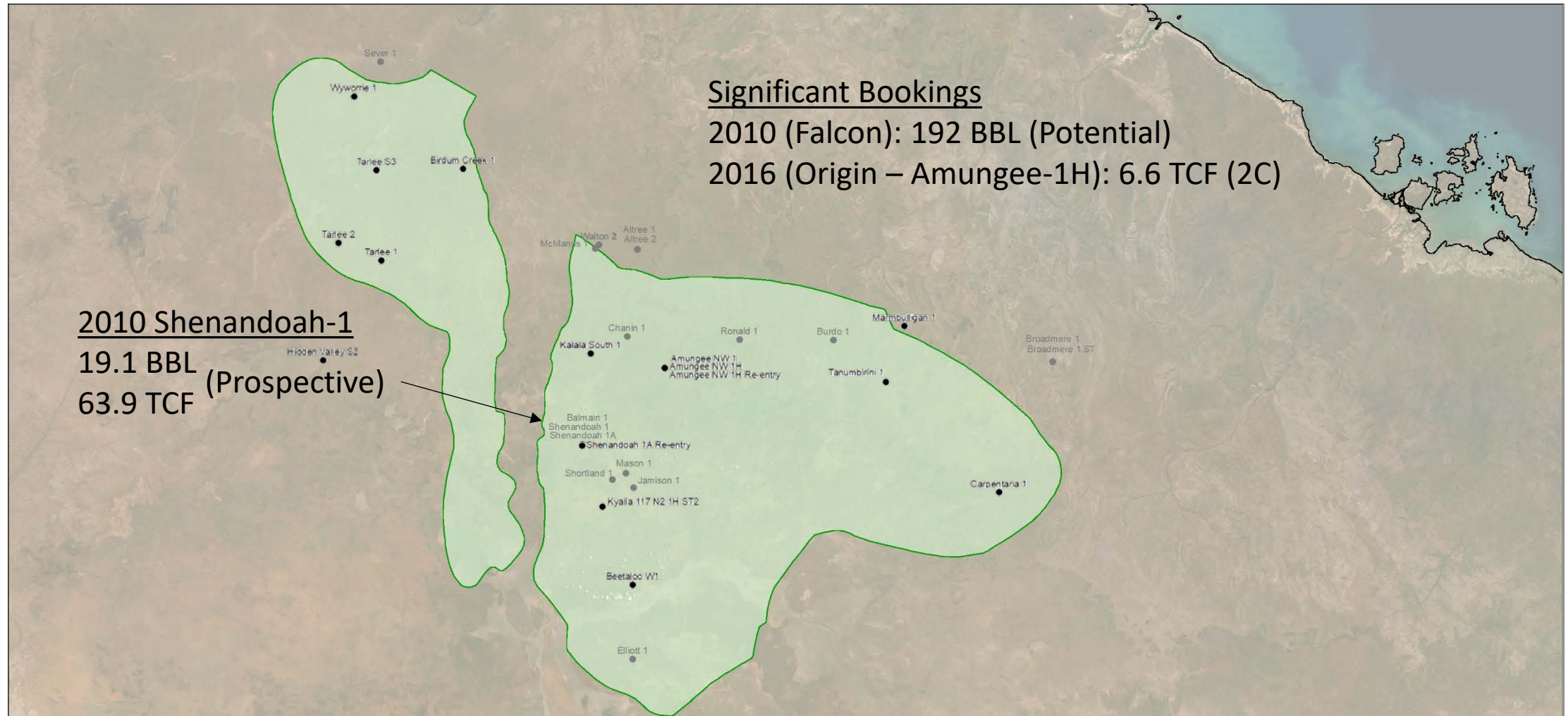
Beetaloo Basin – Well Drilling up to 2010



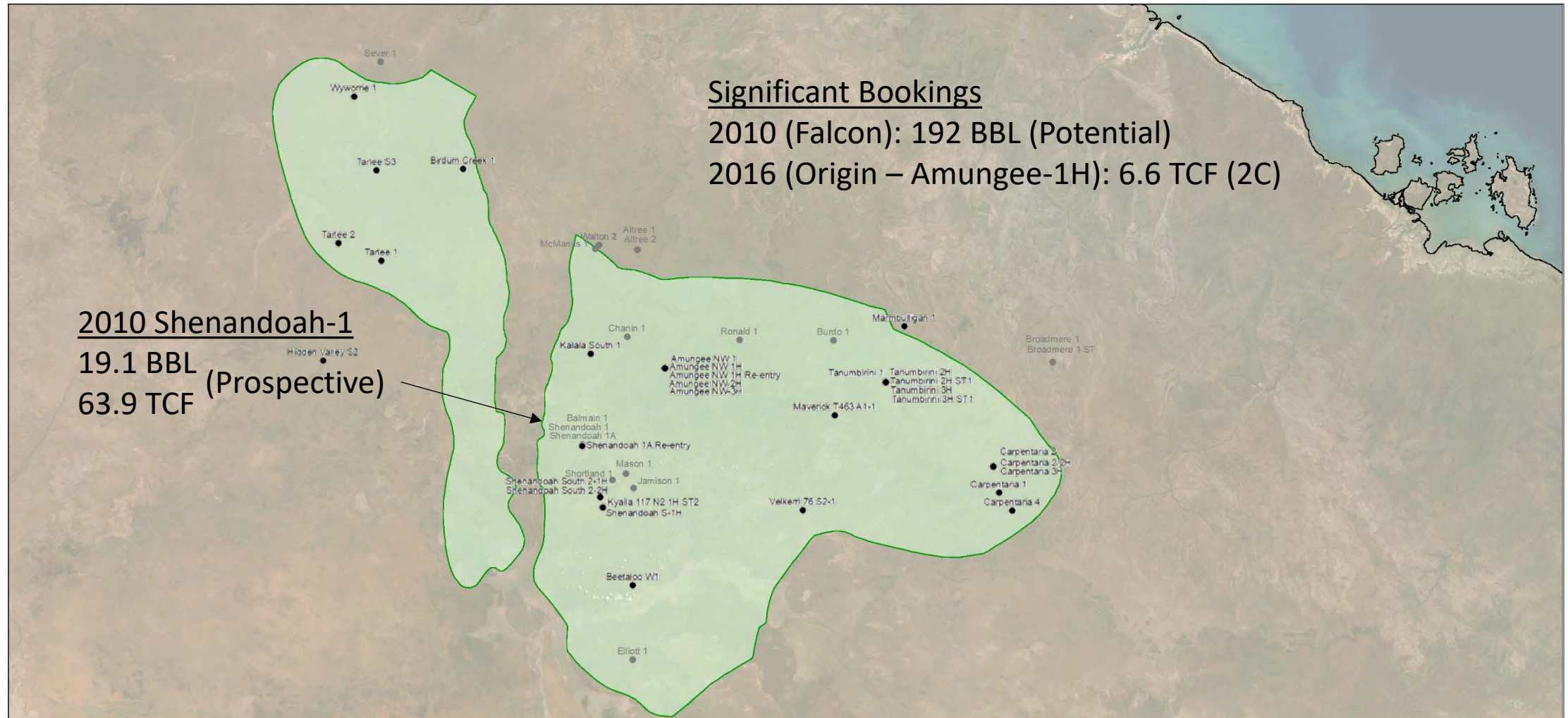
Beetaloo Basin – Well Drilling 2011-2015



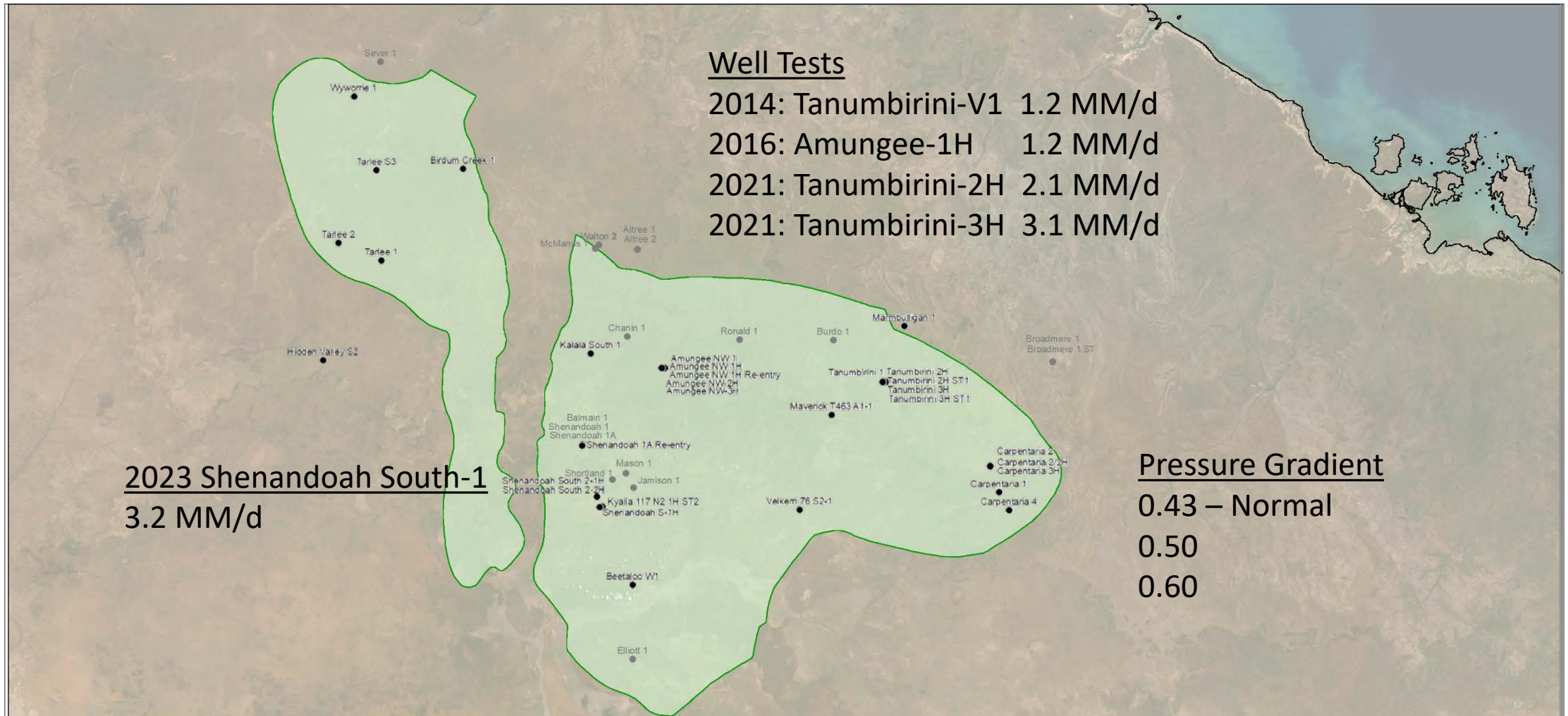
Beetaloo Basin – Well Drilling 2016-2020



Beetaloo Basin – Well Drilling 2021-Present



Beetaloo Basin – Well Tests





Unconventional Discovery

What is required?

Questions and Discussion on Beetaloo Example.